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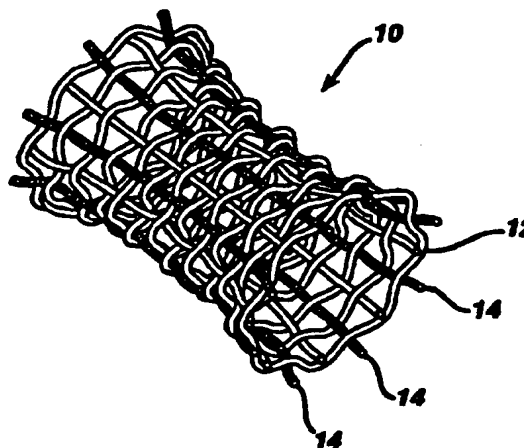
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**(54) Wire reinforced vascular prosthesis**

(57) What is described herein is an endovascular tube or bifurcated prosthesis used for the repair of aneurysms or other vessel disease. This can be soft or hard occlusive disease. This prosthesis is constructed by fabricating a structure that consists of a textile or other polymeric material and through which is threaded a superelastic metal wire such as a nitinol, a ductile wire or other filament material. The textile can be a polymeric material. The wire provides the self-expandability of the current device. Ideally, the thickness of the device should be minimized, so that it can be delivered to the diseased site using a percutaneous procedure.

**FIG. 1**



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## EUROPEAN SEARCH REPORT

Application Number  
EP 99 30 1335

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 674 276 A (ANDERSEN ERIK ET AL) 7 October 1997 (1997-10-07) * figures 1,3 * * column 4, line 32 - line 49 * * column 5, line 33 - line 45 * * column 6, line 20 - line 65 * * column 7, line 25 - line 54 *	1-4,6-10	A61F2/06
X	EP 0 804 909 A (SCHNEIDER USA INC) 5 November 1997 (1997-11-05) * figure 6 * * column 6, line 38 - line 43 * * column 6, line 55 - column 7, line 4 * * column 7, line 28 - column 10, line 25 * * column 10, line 26 - column 11, line 12 * * column 17, line 34 - line 58 *	1-4,6,9,10	
Y	---	5	
Y	EP 0 646 365 A (PARODI JUAN C) 5 April 1995 (1995-04-05) * figures 4,23 * * column 10, line 34 - column 11, line 24 *	5	TECHNICAL FIELDS SEARCHED (Int.Cl.6) A61F
X	US 4 610 688 A (SILVESTRINI THOMAS A ET AL) 9 September 1986 (1986-09-09) * figure 2 * * column 3, line 62 - column 4, line 49 * * column 5, line 1 - column 7, line 5 *	1,9	
X	EP 0 689 807 A (ADVANCED CARDIOVASCULAR SYSTEM) 3 January 1996 (1996-01-03) * figures 1,7,8 * * column 6, line 14 - column 8, line 35 * * claims 11-13 *	9	
A	---	1	
		-/--	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 25 January 2000	Examiner Mary, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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# EUROPEAN SEARCH REPORT

Application Number  
EP 99 30 1335

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	EP 0 464 755 A (NISSHO KK) 8 January 1992 (1992-01-08) * figures 4,7 * * page 5, line 15 - line 42 * * page 5, line 56 - page 6, line 2 * * page 6, line 48 - line 14 * * claims 1-6 * -----	1,7-9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		25 January 2000	Mary, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/82 (P44Co1)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 1335

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

25-01-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5674276 A	07-10-1997	US 5366504 A	22-11-1994
		US 5405378 A	11-04-1995
		CA 2139564 A	20-01-1994
		EP 0651624 A	10-05-1995
		JP 7509152 T	12-10-1995
		WO 9401056 A	20-01-1994
		US 5876445 A	02-03-1999
		US 5653748 A	05-08-1994
EP 0804909 A	05-11-1997	US 5718159 A	17-02-1998
		AU 1992897 A	06-11-1997
		CA 2202708 A	30-10-1997
		JP 10033692 A	10-02-1998
EP 0646365 A	05-04-1995	US 5578071 A	26-11-1996
		AU 707812 B	22-07-1999
		AU 1661597 A	05-06-1997
		AU 699556 B	10-12-1998
		AU 1661697 A	05-06-1997
		AU 699279 B	26-11-1998
		AU 1661797 A	05-06-1997
		AU 707720 B	15-07-1999
		AU 1661897 A	05-06-1997
		AU 678511 B	29-05-1997
		AU 7432894 A	13-04-1995
		BR 9403662 A	27-06-1995
		CA 2132815 A, C	02-04-1995
		EP 0903118 A	24-03-1999
		EP 0903119 A	24-03-1999
		EP 0903120 A	24-03-1999
		JP 8047503 A	20-02-1996
		US 5693087 A	02-12-1997
		US 5571173 A	05-11-1996
		US 5643208 A	01-07-1997
		US 5591229 A	07-01-1997
		ZA 9407492 A	15-05-1995
US 4610688 A	09-09-1986	AT 21816 T	15-09-1986
		AU 554461 B	21-08-1986
		AU 2636584 A	11-10-1984
		CA 1220601 A	21-04-1987
		DK 176984 A	05-10-1984
		EP 0122744 A	24-10-1984
		IE 55194 B	20-06-1990
		IL 71426 A	30-06-1988
		JP 1375239 C	22-04-1987

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 1335

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

25-01-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4610688 A		JP 59194738 A	05-11-1984
		JP 61040420 B	09-09-1986
		KR 8601954 B	05-11-1986
		MX 159168 A	26-04-1989
		US 4834755 A	30-05-1989
		ZA 8402473 A	27-11-1985
EP 0689807 A	03-01-1996	US 5629077 A	13-05-1997
		CA 2152647 A	28-12-1995
		JP 8024346 A	30-01-1996
		US 5766710 A	16-06-1998
EP 0464755 A	08-01-1992	JP 2619972 B	11-06-1997
		JP 4061863 A	27-02-1992
		JP 4073057 A	09-03-1992
		DE 69109374 D	08-06-1995
		DE 69109374 T	25-01-1996
		US 5236447 A	17-08-1993

EPO FORM P459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82